

SEQUENCE LISTING

<110> Takeda Chemical Industries, Ltd.

<120> RFRP Receptor Antagonist

<130> 3169W00P

<150> JP 2003-114313

<151> 2003-04-18

<160> 4

<210> 1

<211> 430

<212> PRT

<213> Human

<400> 1

Met Glu Gly Glu Pro Ser Gln Pro Pro Asn Ser Ser Trp Pro Leu Ser

1 5 10 15

Gln Asn Gly Thr Asn Thr Glu Ala Thr Pro Ala Thr Asn Leu Thr Phe

20 25 30

Ser Ser Tyr Tyr Gln His Thr Ser Pro Val Ala Ala Met Phe Ile Val

35 40 45

Ala Tyr Ala Leu Ile Phe Leu Leu Cys Met Val Gly Asn Thr Leu Val

50 55 60

Cys Phe Ile Val Leu Lys Asn Arg His Met His Thr Val Thr Asn Met

65 70 75 80

Phe Ile Leu Asn Leu Ala Val Ser Asp Leu Leu Val Gly Ile Phe Cys

85 90 95

Met Pro Thr Thr Leu Val Asp Asn Leu Ile Thr Gly Trp Pro Phe Asp

100 105 110

Asn Ala Thr Cys Lys Met Ser Gly Leu Val Gln Gly Met Ser Val Ser

115 120 125

Ala Ser Val Phe Thr Leu Val Ala Ile Ala Val Glu Arg Phe Arg Cys			
130	135	140	
Ile Val His Pro Phe Arg Glu Lys Leu Thr Leu Arg Lys Ala Leu Val			
145	150	155	160
Thr Ile Ala Val Ile Trp Ala Leu Ala Leu Leu Ile Met Cys Pro Ser			
165	170	175	
Ala Val Thr Leu Thr Val Thr Arg Glu Glu His His Phe Met Val Asp			
180	185	190	
Ala Arg Asn Arg Ser Tyr Pro Leu Tyr Ser Cys Trp Glu Ala Trp Pro			
195	200	205	
Glu Lys Gly Met Arg Arg Val Tyr Thr Thr Val Leu Phe Ser His Ile			
210	215	220	
Tyr Leu Ala Pro Leu Ala Leu Ile Val Val Met Tyr Ala Arg Ile Ala			
225	230	235	240
Arg Lys Leu Cys Gln Ala Pro Gly Pro Ala Pro Gly Gly Glu Glu Ala			
245	250	255	
Ala Asp Pro Arg Ala Ser Arg Arg Arg Ala Arg Val Val His Met Leu			
260	265	270	
Val Met Val Ala Leu Phe Phe Thr Leu Ser Trp Leu Pro Leu Trp Ala			
275	280	285	
Leu Leu Leu Leu Ile Asp Tyr Gly Gln Leu Ser Ala Pro Gln Leu His			
290	295	300	
Leu Val Thr Val Tyr Ala Phe Pro Phe Ala His Trp Leu Ala Phe Phe			
305	310	315	320
Asn Ser Ser Ala Asn Pro Ile Ile Tyr Gly Tyr Phe Asn Glu Asn Phe			
325	330	335	
Arg Arg Gly Phe Gln Ala Ala Phe Arg Ala Arg Leu Cys Pro Arg Pro			
340	345	350	

Ser Gly Ser His Lys Glu Ala Tyr Ser Glu Arg Pro Gly Gly Leu Leu

355

360

365

His Arg Arg Val Phe Val Val Val Arg Pro Ser Asp Ser Gly Leu Pro

370

375

380

Ser Glu Ser Gly Pro Ser Ser Gly Ala Pro Arg Pro Gly Arg Leu Pro

385

390

395

400

Leu Arg Asn Gly Arg Val Ala His His Gly Leu Pro Arg Glu Gly Pro

405

410

415

Gly Cys Ser His Leu Pro Leu Thr Ile Pro Ala Trp Asp Ile

420

425

430

<210> 2

<211> 432

<212> PRT

<213> Rat

<400> 2

Met Glu Ala Glu Pro Ser Gln Pro Pro Asn Gly Ser Trp Pro Leu Gly

5

10

15

Gln Asn Gly Ser Asp Val Glu Thr Ser Met Ala Thr Ser Leu Thr Phe

20

25

30

Ser Ser Tyr Tyr Gln His Ser Ser Pro Val Ala Ala Met Phe Ile Ala

35

40

45

Ala Tyr Val Leu Ile Phe Leu Leu Cys Met Val Gly Asn Thr Leu Val

50

55

60

Cys Phe Ile Val Leu Lys Asn Arg His Met Arg Thr Val Thr Asn Met

65

70

75

80

Phe Ile Leu Asn Leu Ala Val Ser Asp Leu Leu Val Gly Ile Phe Cys

85

90

95

Met Pro Thr Thr Leu Val Asp Asn Leu Ile Thr Gly Trp Pro Phe Asp

100	105	110	
Asn Ala Thr Cys Lys Met Ser Gly Leu Val Gln Gly Met Ser Val Ser			
115	120	125	
Ala Ser Val Phe Thr Leu Val Ala Ile Ala Val Glu Arg Phe Arg Cys			
130	135	140	
Ile Val His Pro Phe Arg Glu Lys Leu Thr Leu Arg Lys Ala Leu Phe			
145	150	155	160
Thr Ile Ala Val Ile Trp Ala Leu Ala Leu Leu Ile Met Cys Pro Ser			
165	170	175	
Ala Val Thr Leu Thr Val Thr Arg Glu Glu His His Phe Met Leu Asp			
180	185	190	
Ala Arg Asn Arg Ser Tyr Pro Leu Tyr Ser Cys Trp Glu Ala Trp Pro			
195	200	205	
Glu Lys Gly Met Arg Lys Val Tyr Thr Ala Val Leu Phe Ala His Ile			
210	215	220	
Tyr Leu Val Pro Leu Ala Leu Ile Val Val Met Tyr Val Arg Ile Ala			
225	230	235	240
Arg Lys Leu Cys Gln Ala Pro Gly Pro Ala Arg Asp Thr Glu Glu Ala			
245	250	255	
Val Ala Glu Gly Gly Arg Thr Ser Arg Arg Arg Ala Arg Val Val His			
260	265	270	
Met Leu Val Met Val Ala Leu Phe Phe Thr Leu Ser Trp Leu Pro Leu			
275	280	285	
Trp Val Leu Leu Leu Leu Ile Asp Tyr Gly Glu Leu Ser Glu Leu Gln			
290	295	300	
Leu His Leu Leu Ser Val Tyr Ala Phe Pro Leu Ala His Trp Leu Ala			
305	310	315	320
Phe Phe His Ser Ser Ala Asn Pro Ile Ile Tyr Gly Tyr Phe Asn Glu			

	325		330		335
Asn Phe Arg Arg Gly Phe Gln Ala Ala Phe Arg Ala Gln Leu Cys Trp					
	340		345		350
Pro Pro Trp Ala Ala His Lys Gln Ala Tyr Ser Glu Arg Pro Asn Arg					
	355		360		365
Leu Leu Arg Arg Arg Val Val Val Asp Val Gln Pro Ser Asp Ser Gly					
	370		375		380
Leu Pro Ser Glu Ser Gly Pro Ser Ser Gly Val Pro Gly Pro Gly Arg					
	385		390		395
					400
Leu Pro Leu Arg Asn Gly Arg Val Ala His Gln Asp Gly Pro Gly Glu					
	405		410		415
Gly Pro Gly Cys Asn His Met Pro Leu Thr Ile Pro Ala Trp Asn Ile					
	420		425		430
<210> 3					
<211> 432					
<212> PRT					
<213> Mouse					
<400> 3					
Met Glu Ala Glu Pro Ser Gln Pro Pro Asn Gly Ser Trp Pro Pro Ser					
	5		10		15
Leu Asn Glu Ser Asp Ala Glu Thr Ala Pro Val Ala Ser Leu Thr Phe					
	20		25		30
Ser Ser Tyr Tyr Gln His Ser Ser Pro Val Ala Ala Met Phe Ile Ala					
	35		40		45
Ala Tyr Ala Leu Ile Phe Leu Leu Cys Met Val Gly Asn Thr Leu Val					
	50		55		60
Cys Phe Ile Val Leu Lys Asn Arg His Met Arg Thr Val Thr Asn Met					
	65		70		75
					80

Phe	Ile	Leu	Asn	Leu	Ala	Val	Ser	Asp	Leu	Leu	Val	Gly	Ile	Phe	Cys
				85			90				95				
Met	Pro	Thr	Thr	Leu	Val	Asp	Asn	Leu	Ile	Thr	Gly	Trp	Pro	Phe	Asp
				100			105				110				
Asn	Ala	Thr	Cys	Lys	Met	Ser	Gly	Leu	Val	Gln	Gly	Met	Ser	Val	Ser
				115			120				125				
Ala	Ser	Val	Phe	Thr	Leu	Val	Ala	Ile	Ala	Val	Glu	Arg	Phe	Arg	Cys
				130			135				140				
Ile	Val	His	Pro	Phe	Arg	Glu	Lys	Leu	Thr	Leu	Arg	Lys	Ala	Leu	Leu
145				150			155				160				
Thr	Ile	Ala	Val	Ile	Trp	Ala	Leu	Ala	Leu	Leu	Ile	Met	Cys	Pro	Ser
				165			170				175				
Ala	Val	Thr	Leu	Thr	Val	Thr	Arg	Glu	Glu	His	His	Phe	Met	Leu	Asp
				180			185				190				
Ala	Arg	Asn	Arg	Ser	Tyr	Pro	Leu	Tyr	Ser	Cys	Trp	Glu	Ala	Trp	Pro
				195			200				205				
Glu	Lys	Gly	Met	Arg	Lys	Val	Tyr	Thr	Ala	Val	Leu	Phe	Ala	His	Ile
210				215			220								
Tyr	Leu	Ala	Pro	Leu	Ala	Leu	Ile	Val	Val	Met	Tyr	Ala	Arg	Ile	Ala
225				230			235				240				
Arg	Lys	Leu	Cys	Gln	Ala	Pro	Gly	Pro	Ala	Arg	Asp	Ala	Glu	Glu	Ala
				245			250				255				
Val	Ala	Glu	Gly	Gly	Arg	Ala	Ser	Arg	Arg	Arg	Ala	Arg	Val	Val	His
				260			265				270				
Met	Leu	Val	Met	Val	Ala	Leu	Phe	Phe	Thr	Leu	Ser	Trp	Leu	Pro	Leu
				275			280				285				
Trp	Val	Leu	Leu	Leu	Leu	Ile	Asp	Tyr	Gly	Glu	Leu	Ser	Glu	Leu	Gln
290				295			300								

Leu His Leu Leu Ser Val Tyr Ala Phe Pro Leu Ala His Trp Leu Ala
 305 310 315 320

Phe Phe His Ser Ser Ala Asn Pro Ile Ile Tyr Gly Tyr Phe Asn Glu
 325 330 335

Asn Phe Arg Arg Gly Phe Gln Ala Ala Phe Arg Ala Gln Leu Cys Trp
 340 345 350

Leu Pro Trp Ala Ala His Lys Gln Ala Tyr Ser Glu Arg Pro Gly Arg
 355 360 365

Leu Leu Arg Arg Arg Val Val Val Asp Val Gln Pro Ser Asp Ser Gly
 370 375 380

Leu Pro Ser Glu Ser Gly Pro Ser Ser Gly Val Pro Gly Pro Asn Arg
 385 390 395 400

Leu Pro Leu Arg Asn Gly Arg Val Ala His Gln Asp Gly Pro Arg Glu
 405 410 415

Gly Pro Gly Cys Asn His Met Pro Leu Thr Ile Pro Ala Trp Asn Ile
 420 425 430

<210> 4

<211> 180

<212> PRT

<213> Human

<400> 4

Met Glu Ile Ile Ser Ser Lys Leu Phe Ile Leu Leu Thr Leu Ala Thr
 1 5 10 15

Ser Ser Leu Leu Thr Ser Asn Ile Phe Cys Ala Asp Glu Leu Val Met
 20 25 30

Ser Asn Leu His Ser Lys Glu Asn Tyr Asp Lys Tyr Ser Glu Pro Arg
 35 40 45

Gly Tyr Pro Lys Gly Glu Arg Ser Leu Asn Phe Glu Glu Leu Lys Asp

50	55	60																	
Trp	Gly	Pro	Lys	Asn	Val	Ile	Lys	Met	Ser	Thr	Pro	Ala	Val	Asn	Lys				
65					70					75				80					
Met	Pro	His	Ser	Phe	Ala	Asn	Leu	Pro	Leu	Arg	Phe	Gly	Arg	Asn	Val				
				85					90					95					
Gln	Glu	Glu	Arg	Ser	Ala	Gly	Ala	Thr	Ala	Asn	Leu	Pro	Leu	Arg	Ser				
				100					105					110					
Gly	Arg	Asn	Met	Glu	Val	Ser	Leu	Val	Arg	Arg	Val	Pro	Asn	Leu	Pro				
				115					120					125					
Gln	Arg	Phe	Gly	Arg	Thr	Thr	Thr	Ala	Lys	Ser	Val	Cys	Arg	Met	Leu				
				130					135					140					
Ser	Asp	Leu	Cys	Gln	Gly	Ser	Met	His	Ser	Pro	Cys	Ala	Asn	Asp	Leu				
145					150					155				160					
Phe	Tyr	Ser	Met	Thr	Cys	Gln	His	Gln	Glu	Ile	Gln	Asn	Pro	Asp	Gln				
				165					170					175					
Lys	Gln	Ser	Arg																
				180															